

**CHEMIST  
CS-1320-11**

**INTRODUCTION**

This position is located in the Office of the Deputy Mayor for Public Safety and Justice (ODMPSJ) in the Department of Forensic Sciences (DFS). The mission of the DFS is to provide high-quality, timely, accurate, and reliable forensic science services using best practices and best available technology, focusing on unbiased science and transparency, to enhance public safety and health.

The incumbent serves as a Chemist who supports the chemical terrorism (CT) initiative under Centers for Disease Control and Prevention (CDC) cooperative agreement.

**MAJOR DUTIES**

Performs specific analytical tests utilizing protocols transferred from the Centers for Disease Control and other general methods where there are established protocols and practices available.

Assists in validating of new methods and protocols, maintains journals, logs and other records pertinent to method validation; and assist higher grade chemists in preparation, standardization and validation of chemical methods. Many procedures are not covered in detail in a laboratory procedures manual, and may involve many steps, whereby each step is dependent on the accuracy of the preceding step.

Reviews scientific literature to determine the chemical and biological characteristics of samples to be analyzed to facilitate sample preparation and analysis.

Assists in interpretation and evaluation of test results to determine validity and scientific significance.

Performs periodic maintenance and calibration of instruments and related equipment within the Chemistry Laboratory. Performs preventive maintenance and quality control on instruments as outlined in the manufacturer's instructions and Standard Operating Procedures.

Disease Control and Prevention, so that unknown specimens can be analyzed and compared to established national values.

Assists in the training of lower level personnel and students in the theoretical and practical aspects of chemistry and quality assurance.

Prepares reports and maintains records of work performed on patient specimens and samples, maintains reagent lot numbers for quality control and files such records in an appropriate manner.

Performs other related duties as assigned.

#### **KNOWLEDGE REQUIRED BY THE POSITION**

Professional knowledge of chemical principles, theories, practices and established methodology sufficient to assist in the analysis of complex and unprecedented samples or specimens.

Professional knowledge of standard computer programs and instrumentation used for calibrating, troubleshooting and instrument operation. This position requires a demonstrated knowledge of functions and use of several types of mass spectrometers and their applications, in at least two of the three following analytical systems: (1) Liquid Chromatography Mass Spectrometry, LC-MS, or LC-MS/MS, (2) Gas Chromatography Mass Spectrometry, GC-MS, and (3) Inductively Coupled Plasma Mass Spectrometry, ICP-MS. In addition, a sound working knowledge of general wet chemical techniques and related safety knowledge is required. Experience at technical writing and general laboratory maintenance is desired.

Professional knowledge of trace metals and organic chemicals in human specimens and experience in analyzing such in blood, urine, hair and tissues is highly desired.

#### **SUPERVISORY CONTROLS**

The incumbent reports to the Chemistry technical supervisor who provides special instructions or specific tasks to perform and/or assists higher level chemists on special projects or team efforts. Independently plans and carries out the work and resolves most technical problems. Work is reviewed from an overall standpoint for meeting the objectives and for solving problems and assists with the planning and resolving complex matters which arise, and coordinates the work with others.



Work is reviewed from an overall standpoint for feasibility and effectiveness in meeting assignment's requirements.

### **GUIDELINES**

The guidelines include Communicable Disease Control (CDC) methods and protocols, chemical references and literature, instrument handbooks, methodology manuals, and current work in the specialty area in addition to criteria set by a certification organizations. The incumbent uses initiative and past personal experience in the specialty area to modify and extend the methods to satisfy unprecedented analytical requests and requirements; and uses resourcefulness and knowledge of the field to adapt and develop new approaches and methods to identify areas that need method developments to the work and needs of the laboratory.

### **COMPLEXITY**

The work consists of executing and validating established analytical and testing methods, and solving complex chemical problems. The work requires interpretation of data, some of which are not conclusive. Assignments may involve analysis of highly complex and unprecedented samples; and unprecedented samples, not covered by established analytical methods. Approved modifications of established methods and development of new methods and techniques may be necessary.

### **SCOPE AND EFFECT**

The work involves serving as a specialist in chemical analyses of complex or unprecedented samples, typically to determine levels of trace metals or organic chemicals in blood, urine, hair or tissues.

The work involves modifying and validating methods to accommodate unusual or unprecedented analytical requirements. The work effort supports the operation of the Chemistry Division and assists clinical staff and the medical community in care and treatment of their patients.

### **PERSONAL CONTACTS**

Personal contacts are with the medical community, health care professionals, Communicable Disease Control personnel, private, state and local hospitals, in addition to other chemists, medical technologist and technicians within the Public Health Laboratory.

### **PURPOSE OF CONTACTS**

The purpose of contacts is to advise on work performed in the Public Health Laboratory and support technical matters regarding the sample or specimen nature, and then report results of the analyses performed, potentially including technical training of students.

### **PHYSICAL DEMANDS**

The work requires prolonged standing, walking, lifting and transporting reagents, gas cylinders, etc.

### **WORK ENVIRONMENT**

Works in a Biosafety Level II public health laboratory. Certain areas will require inoculation to mitigate disease contraction, including specific physical examinations. Work involves regular and recurring exposure in a controlled environment to irritant chemicals and potentially infectious specimens. Required safety precautions including, but not limited to: protective clothing (e.g., laboratory coats and gloves) and eye protection (e.g., safety goggles).

### **OTHER SIGNIFICANT FACTS**

A minimum of a Bachelors of Science degree in Chemistry and two years of experience in performing chemical analyses involved in developing and modifying methods that are used to analyze trace elements and other chemical metabolites in human specimens is required.

### **SPECIAL REQUIREMENTS:**

This position's duty station will be housed within the Consolidated Forensic Laboratory (CFL) which is a protection-sensitive facility. As such, incumbents of this position shall be subject to criminal background checks, background investigations, and mandatory drug and alcohol testing, as applicable.

The nature of the DFS mission necessarily involves the potential risks associated with biological or chemical hazards, including morgue functions. Although contact with these functions is intended to be minimal, the risks are nevertheless possible; training to recognize, address, and mitigate these risks is required as is dealing with potentially personally difficult topics, such as crime, death, and disease.



# DISTRICT OF COLUMBIA GOVERNMENT

## ONLINE EMPLOYMENT APPLICATION

### POSITION VACANCY INFORMATION

Position Title Chemist Vacancy Announcement 22124

### PERSONAL DATA

Last Name: Taylor Middle Name: E  
First Name: Glen  
Name: Taylor, Glen E  
Address: 5719 Falkland Place  
Capital Heights MD20743  
Country: USA  
Telephone: Phone Type:  
Email Address: Email Type:

### DC PREFERENCE DATA

☐ Previous DC Employee ☐ Never Employed with District before  
☒ Current DC Employee

### MINIMUM ACCEPTABLE PAY/GRADE

Pay Plan: DS Grade: 11

### DC PAY HISTORY

Highest Pay Plan: DS Grade: 11  
Highest Career Tenure: Career Service-Term

### RESIDENCY

DC Residency Preference:

### PRIORITY PLACEMENT

End Date	Pri Placement	Pay Plan	Occ Series	Salary Grade
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### EMPLOYMENT

START DT	END DT	EMPLOYER	Pay Plan	Occ Series	Salary grade
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### RANKING FACTORS

#### Ranking Factors

Ranking Factor #1: Professional knowledge of chemical principles, theories, practices and established methodology sufficient to assist in the analysis of complex and unprecedented samples and specimens.  
I have been working in the CT Lab for the past 7 years and have validated 6 methods.

Ranking Factor #2: Professional knowledge of standard computer programs and instrumentation used for calibrating, troubleshooting and instrument operation.  
I have been train on the ICP-MS, GC-MS, LC-MS

Ranking Factor #3: Demonstrated knowledge of functions and use of several types of mass spectrometers and their

applications, in at least two of the three following analytical systems: (1) Liquid Chromatography Mass Spectrometry, LC-MS, or LC-MS/MS, (2) Gas Chromatography Mass Spectrometry, GS-MS, and (3) Inductively Coupled Plasma Mass Spectrometry, ICP-MS.

(1) GC-MS The function on this instrument is to heat a compound and take the gas(Head Space) and measure the Mass of the Compound. Depending on what that is, it will determine a specific compound. (2) ICP-MS The function of this triple Quad instrument is to delivered a certain amount of liquid into the instrument. Once it passes throught the torch, it is heated up and vaporize. It than passes throught the triple quad and picks up the ions we are looking for.

**Ranking Factor #4: Professional knowledge of trace metals and organic chemicals in human specimens and experience in analyzing such in blood, urine, hair and tissues.**

I have been trained on methods with trace metals. Anaylzing blood and urine for the past 10 years.

**Selective Placement Factor #1: Must possess a Bachelor of Science degree in Chemistry and two years of experience in performing chemical analyses involved in developing and modifying methods that are used to analyze trace elements and other chemical metabolites in human specimens is required.**

Yes I have a BS in Chemistry and I have 10+ years of experience.

#### LANGUAGES

Language	Speaking Proficiency	Reading Proficiency	Writing Proficiency
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#### MEMBERSHIPS

Membership	Date Issued
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#### LICENSE AND CERTIFICATE

License and Certificate	Date Issued
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#### SCHOOL EDUCATION

School Type	School
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#### COLLEGE/UNIVERSITY EDUCATION

Degree	Major
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#### TRAINING

Course Title	School Name
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Hlth/Sfty OSHA 10: 4 Flam Liqu  
Hlth/Sfty OSHA 10: 9 Sfty Prog  
Hlth/Sfty OSHA 10: 6 IntroOSHA  
Hlth/Sfty OSHA 10: 10 Walking  
Hlth/Sfty OSHA 10: 3 FireProte  
Hlth/Sfty OSHA 10: 1Blood/Path  
Hlth/Sfty OSHA 10: 5 Haz Comm  
Hlth/Sfty OSHA 10: 2 ElectrHaz  
Hlth/Sfty OSHA 10: 7 Machine  
Hlth/Sfty OSHA 10: 8 PersProct  
Ethics Webinar

#### REFERENCES

Name	Title
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